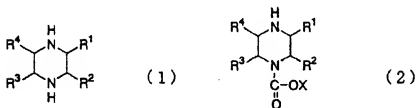


In the Claims

1. (Currently Amended) A process for producing an oxycarbonyl-substituted piperazine derivative, ~~in which comprising oxycarbonylating a piperazine derivative represented by formula (1) is oxycarbonylated in the presence of 1)~~ a reagent comprising benzyl chlorocarbonate or di-tert-butyl dicarbonate and an organic alcohol solvent with a water content of 15 wt% or less to produce an oxycarbonyl-substituted piperazine derivative represented by formula (2)



wherein the R¹ in the formula (1) and the formula (2) denotes a methyl group, and R², R³ and R⁴ denote a hydrogen atom respectively; X denotes a tert-butyl group or benzyl group; ~~excluding the case where all of R¹, R², R³ and R⁴ denote a hydrogen atom respectively~~) and the compounds represented by the formula (1) and the formula (2) are optically active substances, and 2) at least one compound selected from the group consisting of pyridine, α-picoline, β-picoline, γ-picoline, 2-ethylpyridine, 3-ethylpyridine, 4-ethylpyridine, 2-n-propylpyridine, 3-n-propylpyridine, 4-n-propylpyridine, 2-isopropylpyridine, 2-phenylpyridine, 2-vinylpyridine, 3-aminopyridine, 2-hydroxypyridine, 2-methoxypyridine, 2-chloropyridine, 3-fluoropyridine, 4-bromopyridine, 3-iodopyridine, 2-formylpyridine, 3-acetylpyridine, 2-pyridinecarboxylic acid, methyl 3-pyridinecarboxylate, 3-pyridinecarboxylic acid amide, 2-cyanopyridine, 3-nitropyridine, pyrrole, indole, pyrazole, isoxazole, isothiazole, indazole, imidazole, oxazole, thiazole, benzimidazole, quinoline, isoquinoline, pyridazine, pyrimidine, pyrazine, quinoxaline, carbazole, α-aminonaphthalene, β-aminonaphthalene, aniline, 2,6-lutidine and trimethylamine.

Claims 2. – 8. (Cancelled)

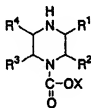
9. (Currently Amended) The process according to claim [[8]]1, wherein the pKa of the compound is 7 or less.

10. (Previously Presented) The process according to claim 9, wherein the compound is a pyridine compound.

11. (Currently Amended) ~~The process according to claim 1,~~ A process for producing an oxycarbonyl-substituted piperazine derivative comprising oxycarbonylating a piperazine derivative represented by formula (1) in the presence of a reagent comprising benzyl chlorocarbonate or di-tert-butyl dicarbonate and an organic alcohol solvent with a water content of 15 wt% or less to produce an oxycarbonyl-substituted piperazine derivative represented by formula (2)



(1)



(2)

wherein the R¹ in the formula (1) and the formula (2) denotes a methyl group, and R², R³ and R⁴ denote a hydrogen atom respectively; X denotes a tert-butyl group or benzyl group; and the compounds represented by the formula (1) and the formula (2) are optically active substances, wherein the piperazine derivative represented by formula [[(1)]] (1) is a diastereomer salt of an optically active piperazine derivative and an optically active resolving agent, obtained by optical resolution using the optically active resolving agent, or the optically active piperazine derivative obtained by decomposing the salts.

12. (Previously Presented) The process according to claim 11, wherein the optically active piperazine derivative obtained by optical resolution with a solvent which is 0.5 to 4.0 times as

heavy as a racemic piperazine derivative in the presence of a lower carboxylic acid or mineral acid is used as the raw material.

13. (Previously Presented) The process according to claim 11 or 12, wherein the optically active resolving agent is optically active tartaric acid.

14. (Previously Presented) The process according to claim 12, wherein the lower carboxylic acid or mineral acid is at least one selected from acetic acid, propionic acid, hydrochloric acid and sulfuric acid.

15. (Currently Amended) The process according to claim 12, wherein the solvent used for performing optical resolution is water or a ~~hydroxan~~ hydroxyan alcohol.

16. (Previously Presented) The process according to claim 11, further comprising decomposing the diastereomer salts obtained by optical resolution from an optically active water soluble piperazine derivative and optically active tartaric acid with a salt of an alkaline earth metal is used in a solvent containing 50 wt% or more of water.

17. (Previously Presented) The process according to claim 16, wherein the salt of an alkaline earth metal is any one of hydroxides, halides, sulfates and carbonates.

18. (Previously Presented) The process according to claim 17, wherein the hydroxide of an alkaline earth metal is any one of magnesium hydroxide, calcium hydroxide, strontium hydroxide and barium hydroxide.

19. (Currently Amended) The process according to claim 1 or 11, wherein the oxycarbonyl-substituted piperazine derivative is refined by

- (1) a step of washing using an organic solvent whose mutual solubility with water at 20°C is 10 wt% or less in a water solvent whose pH is 3 or less, and/or
- (2) a distillation step.

20. (Previously Presented) The process according to claim 19, wherein the organic solvent whose mutual solubility with water at 20°C is 10 wt% or less is an aromatic hydrocarbon.

Claims 21. – 24. (Cancelled)